

Bang, bang, bang, bang, *click...*

BY KEN JAVES

That “click” can range in severity from a minor annoyance to a life-altering (or ending) sound. On the low end of the spectrum, experiencing a stoppage or malfunction with your favorite pistol and ammunition combination while plinking steel in the backyard can be concerning; though you are probably not in a life-threatening situation and have time available to diagnose and solve the problem. On the other end, if that click occurs while defending yourself or your family, the results may be dire if you lack the knowledge or skill to correct the issue in a timely manner. In the dark humor trademark of the firearms training industry we say, “You have the rest of your life to figure it out”. To tip the scales in your favor, we will define stoppage, malfunction and failure with precision.

Per military testing requirements, a stoppage is defined as any deficiency that prevents a pistol from completing its cycle of operation as intended, but is corrected through the proper application of the immediate action procedure, without the use of tools and without disassembling the pistol in any way.

A malfunction is defined as a mechanical deficiency with the pistol that prevents it from completing its cycle of operation and which requires the use of tools, disassembly of any part of the pistol, and/or takes more than 30 seconds to resolve; but does not require any parts replacement.

A failure is defined as a mechanical deficiency with the pistol that prevents it from completing its cycle of operation that requires parts replacement or repair to resolve.

To provide an indicator for the reliability

expected from modern service pistols, I'll reference the test data from the recent Army testing that resulted in the selection of the Sig M17 as the new service pistol replacement for the M9. During their Product Verification Test (PVT) conducted last year the then XM17 pistols tested demonstrated 8,929 Mean Rounds Between Failures (MRBF) and 1,923 Mean Rounds Between Stoppages (MRBF)¹. This means that, on average, each of the pistols was capable of firing almost two thousand rounds before the cycle of operation was interrupted. Even testing near the beginning of the last century subjected the competitors to a 6,000 round endurance test that resulted in the selection of the M1911 as the Army's service pistol. The Colt 1911 was the only pistol to complete the 6,000 rounds without a stoppage or broken parts. Others

SOLVING PISTOL MALFUNCTIONS



CERTUD ZACH



The most effective solution for staving off stoppages begins with prevention. Select a reliable pistol from a quality manufacturer and feed it quality ammunition.

have also performed independent high-round count testing to satisfy their own curiosity as to the reliability of modern pistols. The most prolific is probably the late Todd Green of PistolTraining.com who once tested an H&K P30 to 91,322 rounds and experienced only 13 stoppages and 5 broken parts over the duration of the test. This produces a result of 18,264 MRBF and 7,025 MRBF for a sample size of one pistol. These examples demonstrate the high mechanical reliability of modern service pistols. One sad fact is that most owners of defensive pistols will never even approach the 2,000 round point and it is entirely conceivable that the average shooter may never experience a stoppage; simply because they don't shoot enough to make it statistically probable. The only problem is we have no way of predicting if that stoppage or malfunction will occur on round 1 or 2,001. The above numbers can lure us into a false sense of security, but we must remember that firearms and ammunition are complex mechanical and chemical machines and a failure of any single component can lead to the failure of the entire system. Even the military re-

quirement for ammunition reliability accepts a 3.5% maximum failure rate for any given lot of 9mm ammunition².

Different organizations have their own terminology to refer to each separate form of stoppage (Type 1, 2, 3, etc.) but I will describe each in relation to what is occurring mechanically within the pistol. The first is a "Failure to Fire" commonly referred to as a "misfire". This is indicated by a "click" without the corresponding "bang" and can be due to the firing pin failing to impact the primer with sufficient force, a failure of the primer itself (dud) or you could just be out of ammunition. Next is the "Failure to Feed" where a round is not picked up from the top of the magazine and chambered, the round is presented too high or too low and at too steep of an angle to allow it to chamber (commonly seen with 1911s) or the round doesn't seat all the way into the chamber, resulting in an "out of battery" condition.

A "Failure to Extract" exists when the expended cartridge case is not removed from the chamber after firing and usually results in what is referred to as a "double-feed" when

the slide tries to chamber a live round its way back forward after recoil.

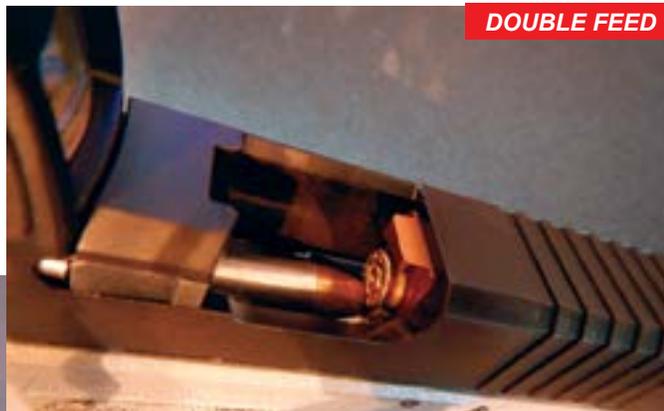
Following a "Failure to Extract" is a "Failure to Eject" where the spent cartridge case is successfully extracted from the chamber, but is not fully ejected and gets stuck between the breech face and chamber, preventing the next live round from fully chambering. This is commonly referred to as a "stovepipe", due to the typical (vertical) orientation of the cartridge, and can be caused by underpowered ammunition, lack of lubrication or firing too close to a wall or barricade where the casing is effectively ejected, but ends up getting bounced back into the action (yep, it happens).

The last stoppage I will cover is technically included under a "Failure to Fire" problem, but the consequences of improperly diagnosing it or failing to recognize it can result in destruction of your pistol and potential physical injury. It is the "Squib Load" where there is insufficient powder in the cartridge or the powder is prevented from combusting properly (like after going through the laundry) which results in the bullet leaving the car-

PROPER MAINTENANCE HELPS PREVENT MALFUNCTIONS, BUT NOTHING CAN GUARANTEE THEY ARE ELIMINATED.



OUT OF BATTERY



DOUBLE FEED

PHOTOS COURTESY OF THE AUTHOR.



STOVEPIPE



FEEDWAY STOPPAGE

tridge, but not having enough power to exit the barrel. If another round is fired with the bullet still lodged in the bore (barrel) it can exceed the tested safe pressure level of the barrel and slide and “blow-up” the gun. The indicators of this condition are a muffled report (not as loud as normal firing) and reduced or no felt recoil. It is important to immediately stop firing and have a qualified individual inspect the pistol before continuing.

The most effective solution for staving off stoppages begins with prevention. Selection of a reliable pistol from a quality manufacturer and feeding it quality ammunition will do much to reduce the probability of a stoppage or malfunction. The next step is performing preventative maintenance which includes proper lubrication, inspection and replacement of wear components at appropriate intervals. The wear components that will most directly affect the reliability of your handgun are the springs, which typically include the recoil, main, and trigger springs. These will vary depending on the manufacturer and I recommend seeking out the manufacturer's recommended replacement interval, asking

a certified armorer or attending an armorer's course. If the information can't be found, a good rule of thumb is to replace all springs at 5,000 rounds for 9mm and below or 3,000 rounds for 40 Caliber and above. Due to the relatively low operational pressures generated by pistol caliber ammunition most of the other components will last for multiple tens of thousands of rounds (for a quality duty-grade pistol). You will notice that cleaning is absent from the list as, despite opinions to the contrary, the common fouling and carbon build-up generated from firing has relatively minor impact on the proper function of the pistol (immersion in dirt, sand, saltwater, and other environmental debris is an entirely different story) as long as the system remains lubricated. I have run pistols for multiple thousands of rounds without issue and the only cleaning I do is commensurate with inspection of the components or to remove environmental debris. The last preventative measure I will mention is utilizing a proper loading procedure. The purpose of a proper loading procedure is to ensure the highest probability of the successful ignition of a

round (and subsequent rounds) when it is required.

THE LOADING PROCEDURE

Starting with an unloaded and cleared pistol, the proper loading procedure is as follows:

Phase One - Preparation:

1. Determine a safe direction and backstop.
2. Inspect your ammunition. Look for proper primer seating depth, flipped or absent primers, corrosion, bullet set-back, proper bullet seating, dented casings, etc.
3. Insert the inspected ammunition into the magazine.

Phase Two – Loading:

4. Point the pistol in the designated safe direction.
5. Lock the slide to the rear and inspect the pistol. This is your opportunity to discover anything that may interfere with the proper operation of the pistol to include: dirt, foreign objects, cracks, lack of lubrication, etc. If you are running any additional equipment such as lights, lasers or an optic, this is also



CPL ALEXIS BENTON

A simple method of working stoppage clearance into live-fire training is to have a friend insert dummy rounds at random into your training magazines.

a good time to verify the operation of those components.

6. Insert the loaded magazine into the magazine well and ensure it is fully seated and retained by the magazine catch/release by tugging on the base of the magazine. Inserting the magazine while the slide is locked to the rear allows the magazine to be fully inserted without any resistance. If the slide is forward you must overcome the magazine spring tension while inserting the magazine to ensure it is fully seated. Using this procedure will also prevent the most common cause of a "Failure to Feed" stoppage which is failing to fully seat the magazine during the initial loading process. Failing to do so allows the first round to chamber and fire, but during recoil the magazine drops just enough to prevent the second round from being stripped from the top of the magazine.

7. Send the slide forward. I prefer utilizing the slide stop as it allows me to replicate my slide-lock-reload procedure but the "slingshot" method is acceptable as well. 8. Perform a "Brass Check" to ensure that a round was chambered. There are a number of methods to determine if a round

has been chambered and many depend on the manufacturer of the pistol. Some also include witness holes, loaded chamber indicators, firing pin indicators, etc. 9. Tap on the rear of the slide and inspect the slide-to-frame fit to ensure that the slide is fully forward and "In Battery".

OK. So, we've gone through all the appropriate preventative measures, but still hit upon one of those 3.5 percent of rounds that fails to fire or encounter any of the myriad factors that can lead to a stoppage. For all of the stoppage conditions I outlined above the very first step is the performance of the "Immediate Action" procedure. It is called such because it is performed immediately (without thought, hesitation or investigation) upon encountering any stoppage as it is the most efficient method for clearing the widest variety of stoppages and malfunctions without slowing down to investigate the problem.

IMMEDIATE ACTION

1. TAP the base of the magazine (with the non-firing hand) to ensure the magazine is fully inserted. As I mentioned earlier, the most common cause of failure-to-feed stoppages

are unseated magazines. *Do not skip this step.*

2. RACK the slide fully to the rear and release it. This will correct a number of potential issues. If the round was a dud it will be ejected and replaced with a fresh one. If the magazine wasn't seated initially this will strip a new round from the top and chamber it and if a "stovepipe" is blocking the ejection port and slide it will remove tension on the empty case and allow it to fall free. Lastly, if you are out of ammunition and the slide didn't automatically lock to the rear it will during this step and allow you to diagnose the condition of the pistol and perform a reload.

3. REASSESS/REENGAGE the target. If the stoppage is of a nature that the Immediate Action Procedure did not correct the deficiency then we move to the next step which is the Remedial Action Procedure. Remedial Action is essentially unloading and clearing the pistol followed by reloading it and attempting to get back in the fight.

REMEDIAL ACTION

1. Seek a position that provides cover. This procedure will take longer to perform than the Immediate Action Procedure and you will be

unable to utilize the pistol until it is complete so finding a position that can provide some protection from incoming fire is advised.

2. Lock the slide to the rear. This relieves tension on the magazine and the top round if it is caught between the breech face and chamber area. Trying to remove a magazine (next step) is an exercise in frustration if the slide is not locked to the rear first.
3. Rip the magazine free from the pistol by depressing the magazine release and pulling on the magazine base-plate at the same time. The magazine is discarded at this point as there is a high probability that it is the cause of the stoppage; unless it is the only magazine you have (I always recommend carrying a spare for just such a circumstance).
4. Rack the slide three times while observing the chamber and breech face to ensure the pistol is clear. This gives the extractor additional opportunities to remove a stuck cartridge from the chamber. If, during the process, you observe that there is no obstruction it is not necessary to complete all three repetitions.
5. Reload the pistol utilizing a fresh magazine.

ALTERNATIVE TECHNIQUES

There are alternative techniques to the Immediate and Remedial procedures outlined above and may provide a faster solution, however they are for specific problems and don't guarantee that the stoppage will be cleared in all circumstances. The first technique is using the non-firing hand to sweep away a stovepipe stoppage. This will correct the majority of stovepipe stoppages, but there is a small percentage that it will not. One example is if the stovepipe occurs on the last round in the magazine (the slide will not lock to the rear because if it does, it will not be a stovepipe). Sweeping the stuck casing out of the way will allow the slide to go forward, but there is not a round available to chamber and you will end up attempting to fire again, receiving a "click" and being forced to conduct a proper Immediate Action Procedure anyway. With a weak ejection there is also the possibility that the slide has not moved far enough to the rear to allow it to strip the next round from the top of the magazine. Sweeping the stovepipe will again just allow the slide to move forward on an empty chamber. An alternative to the Remedial Action Procedure combines steps and skips locking the slide to the rear. The magazine release is depressed while racking the slide three times which

allows the magazine to drop free. This technique may save some time, but I have only found it to be successful about 50 percent of the time across a wide variety of pistols and rifles.

TRAINING AND PRACTICE

Both the Immediate Action and Remedial Action Procedures can easily be practiced utilizing dry-fire and dummy rounds. For the Immediate Action Procedure, I simply incorporate it into my normal dry-fire routine and use it to reset the pistol in between repetitions. Remedial action requires a little more time and effort to set-up and practice. You will start by setting up a double-feed condition with the pistol. First, *ensure the pistol is clear and no live ammunition is present in your dry training area.* Then, lock the slide to the rear, point the pistol at the ground and place a dummy round in the chamber. While keeping the pistol pointed downwards insert a magazine with dummy rounds into the magazine well, firmly seat it and then depress the slide stop to allow the slide to move forward. This will pinch the round at the top of the magazine between the base of the chambered round and the breech face. At this point you can conduct the Immediate followed by Remedial Action Procedures to clear the stoppage.

A simple method of working stoppage clearance into live-fire training is to have a friend insert dummy rounds at random into your training magazines. In spite of the mechanical reliability of modern firearms and ammunition, stoppage clearance drills are important and should be practiced until they become smooth and automatic so that "click" is only a minor inconvenience. ✓

BIO

Ken Javes (www.shibumitactical.com) has over 19 years of military and security contracting experience to include multiple combat and contract deployments to South West Asia. He has served with Marine Infantry and Force Reconnaissance units. He possesses instructor certifications from multiple agencies and organizations, and has trained with some of the top military and competitive shooters in the country.

NOTES

1. DOT&E FY17 Army Program Report on the XM17/XM18 Modular Handgun System (MHS)
2. MIL-C-70508 Military Specification: Cartridge, 9mm, Ball, NATO, XM882, M882

**SHOOT
300%
BETTER**
**IN 21 DAYS OR YOUR
MONEY BACK...
FOR LESS THAN THE
COST OF A BOX OF
PRACTICE AMMO!**



**DRY FIRE TRAINING CARDS –
THE BEST WAY TO KEEP YOUR
SHOOTING SKILLS IN PEAK
CONDITION ALL YEAR LONG**

52 dry fire training exercises and drills that cover:

- firearms fundamentals
- advanced concepts
- dry fire exercise drills
- dry fire complex movement drills
- low-light drills

They are a force multiplier that will allow you to create muscle memory and hardwire perfect form into your subconscious mind faster (and cheaper) than what is humanly possible with just live fire or traditional dry fire alone.

DryFireCards.com/tnp